Fig. 1

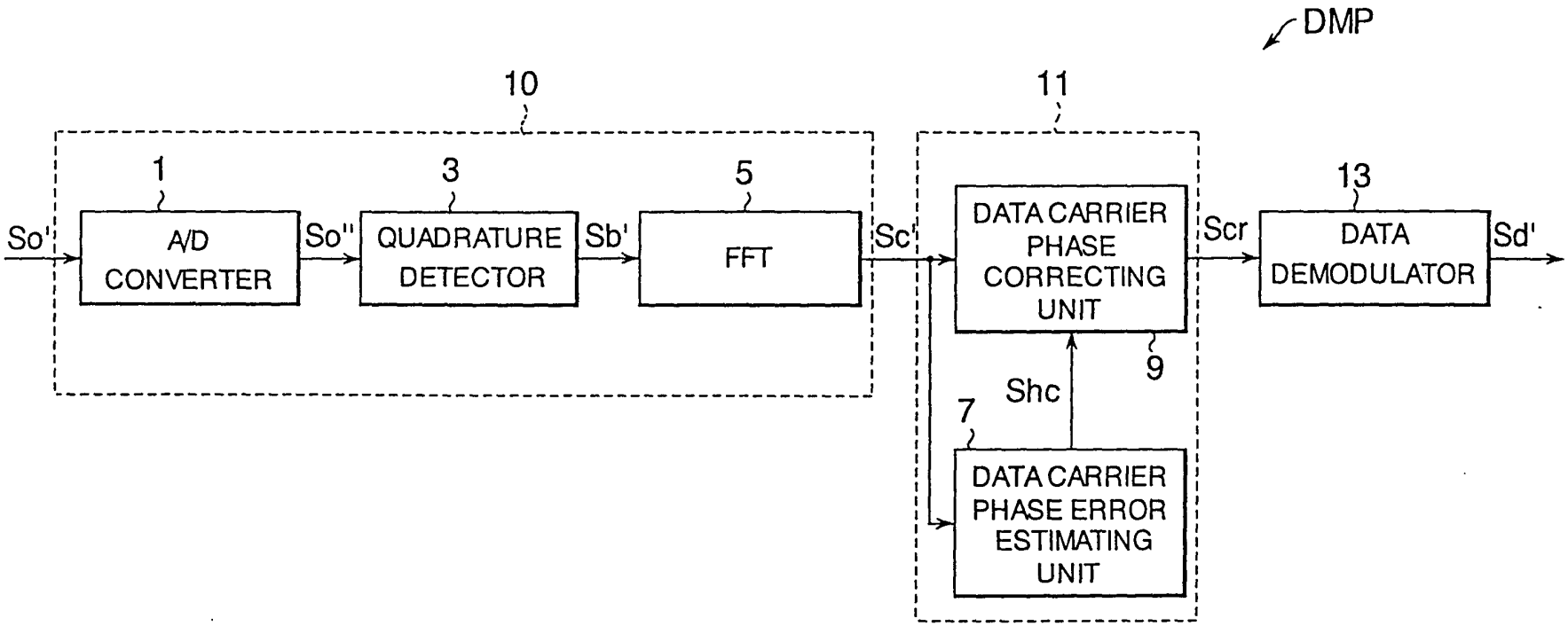
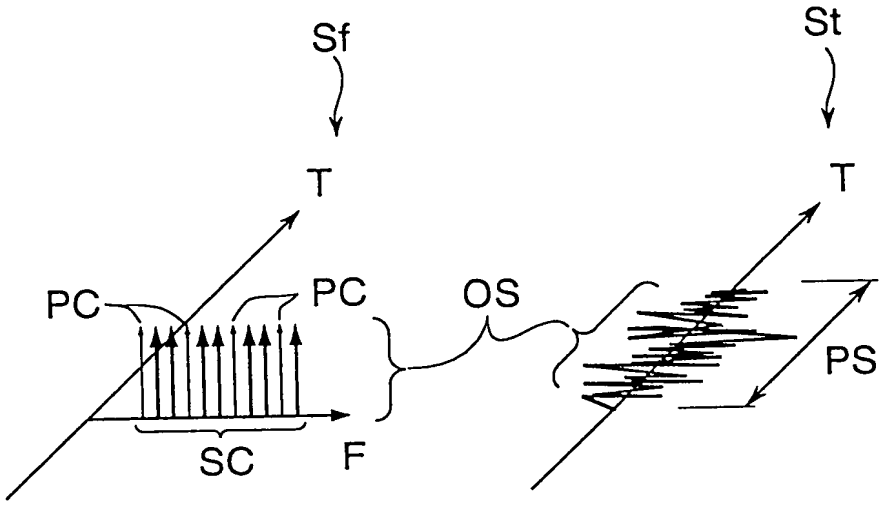

DMP
10
11
1
3
5
13
So'
A/D CONVERTER
So''
QUADRATURE DETECTOR
Sb'
FFT
Sc'
DATA CARRIER PHASE CORRECTING UNIT
9
Scr
DATA DEMODULATOR
Sd'
Shc
7
DATA CARRIER PHASE ERROR ESTIMATING UNIT

Fig. 2



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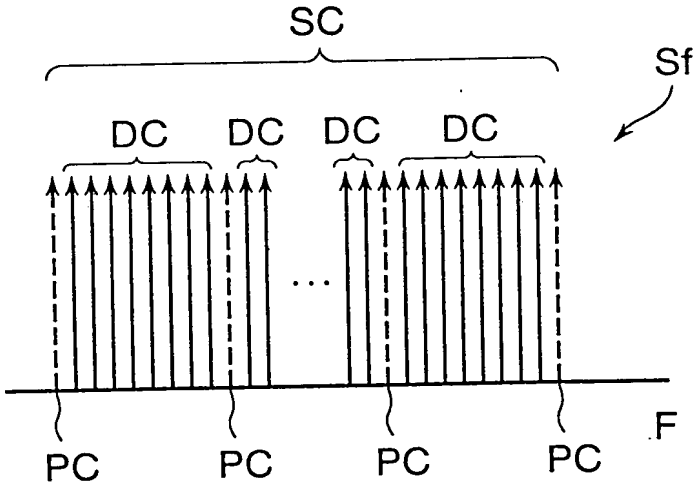

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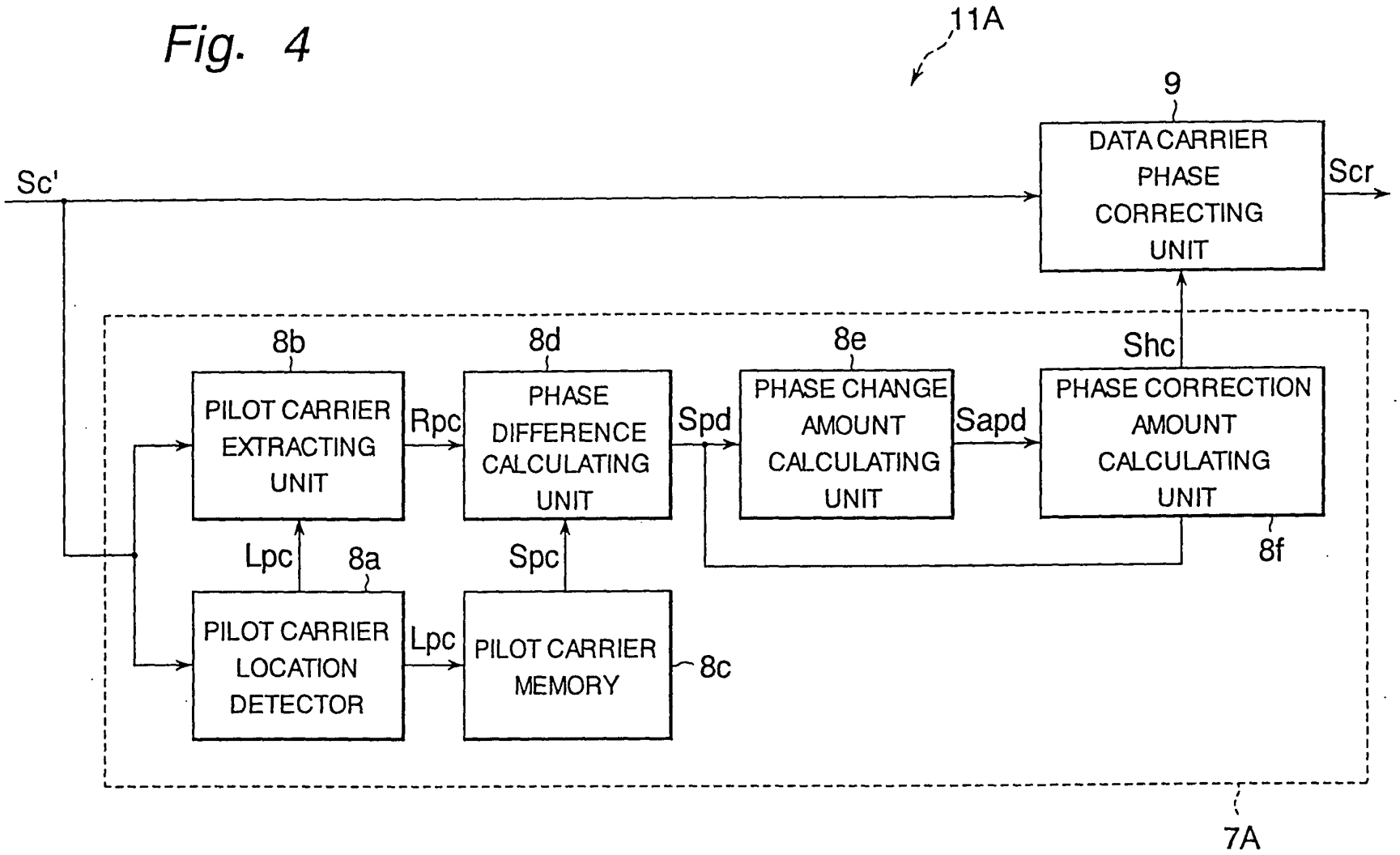

11A
9
DATA CARRIER PHASE CORRECTING UNIT
Sc'
Scr
8b
PILOT CARRIER EXTRACTING UNIT
Rpc
8d
PHASE DIFFERENCE CALCULATING UNIT
Spd
8e
PHASE CHANGE AMOUNT CALCULATING UNIT
Sapd
Shc
PHASE CORRECTION AMOUNT CALCULATING UNIT
8f
Lpc
8a
Spc
PILOT CARRIER LOCATION DETECTOR
Lpc
PILOT CARRIER MEMORY
8c
7A

Fig. 5

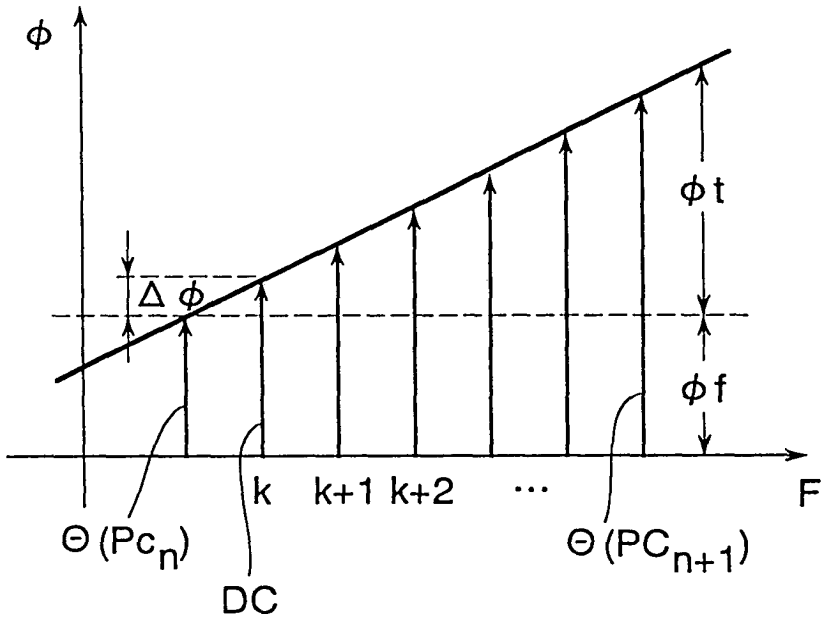


Fig. 6

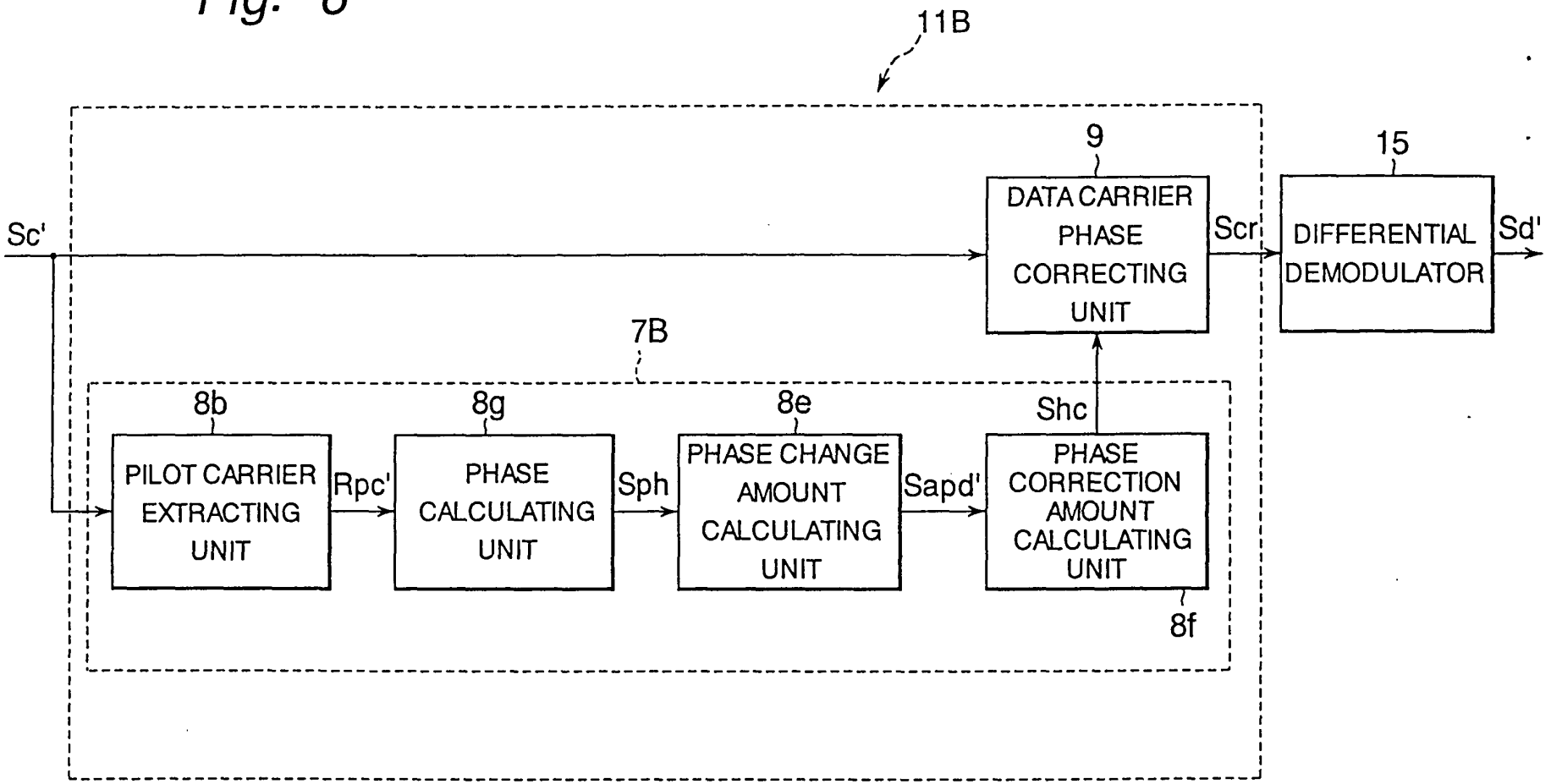
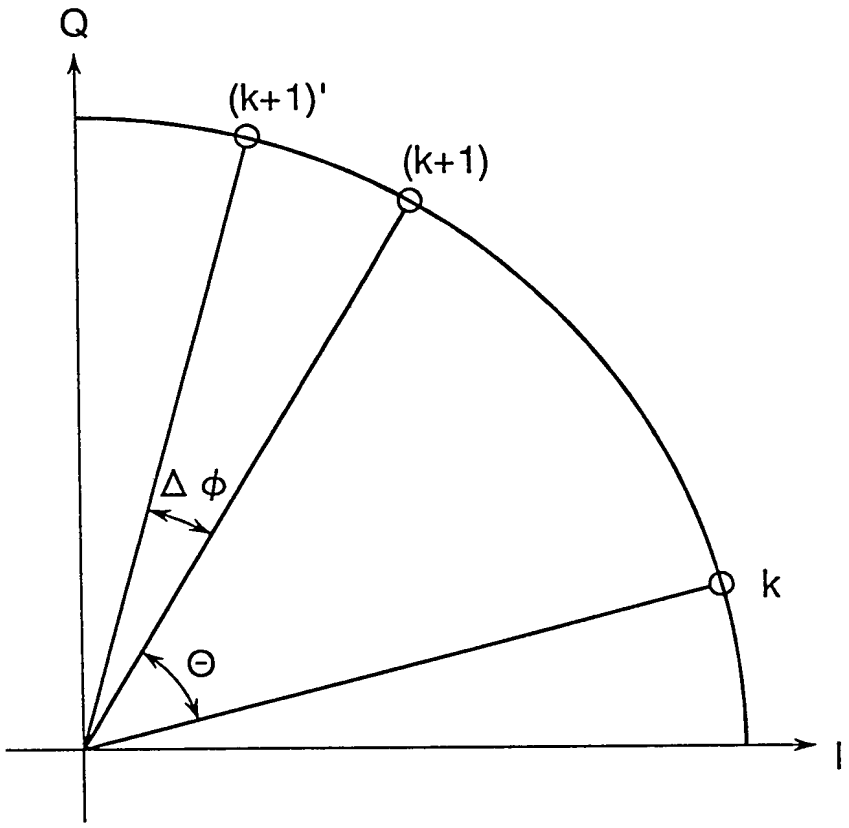

11B
9
15
DATA CARRIER PHASE CORRECTING UNIT
DIFFERENTIAL DEMODULATOR
Sc'
Scr
Sd'
7B
8b
8g
8e
Shc
PILOT CARRIER EXTRACTING UNIT
Rpc'
PHASE CALCULATING UNIT
Sph
PHASE CHANGE AMOUNT CALCULATING UNIT
Sapd'
PHASE CORRECTION AMOUNT CALCULATING UNIT
8f

Fig. 7



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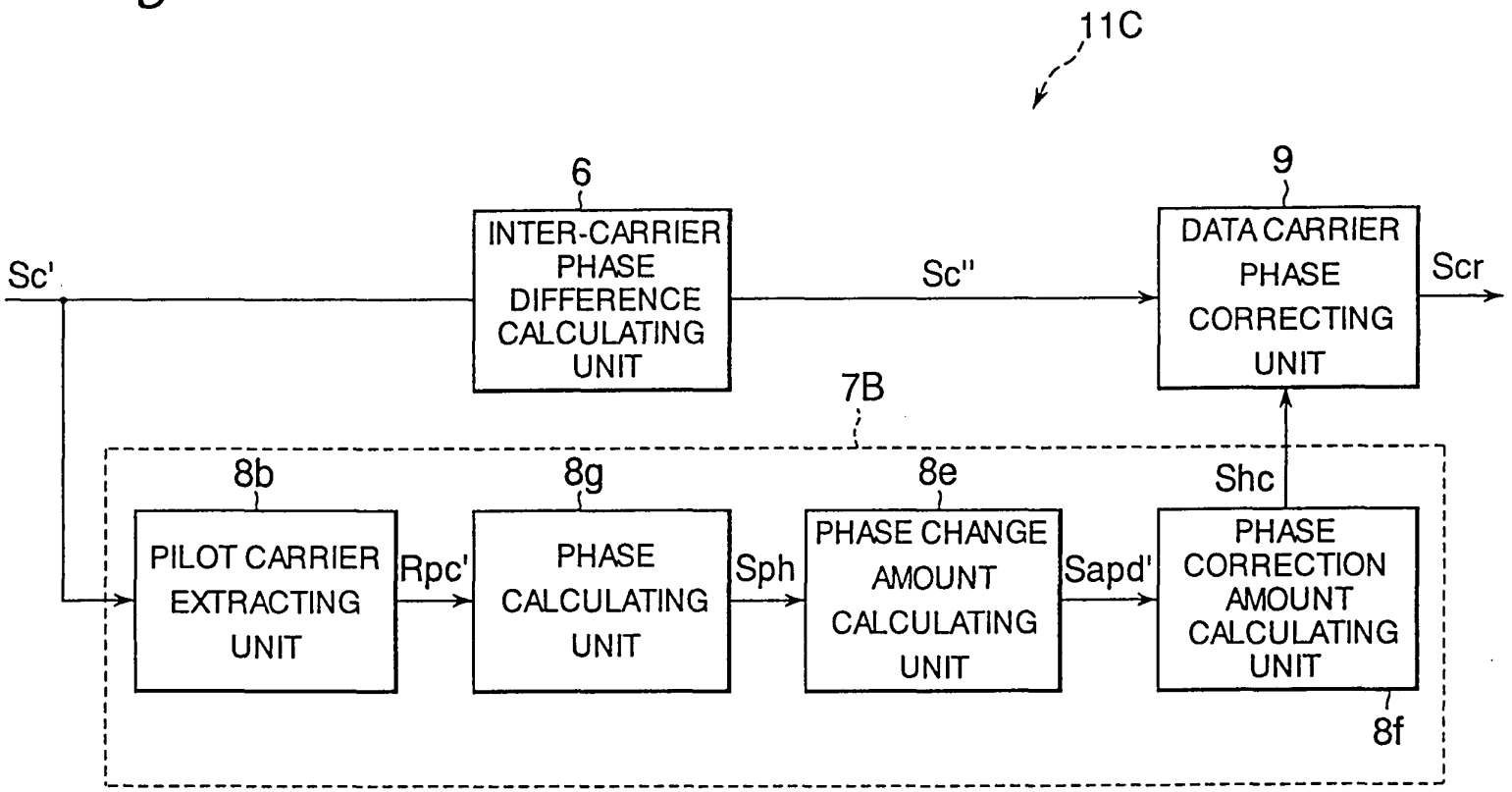

11C
6
INTER-CARRIER PHASE DIFFERENCE CALCULATING UNIT
9
DATA CARRIER PHASE CORRECTING UNIT
Sc'
Sc"
Scr
7B
8b
PILOT CARRIER EXTRACTING UNIT
Rpc'
8g
PHASE CALCULATING UNIT
Sph
8e
PHASE CHANGE AMOUNT CALCULATING UNIT
Sapd'
Shc
PHASE CORRECTION AMOUNT CALCULATING UNIT
8f

Fig. 9

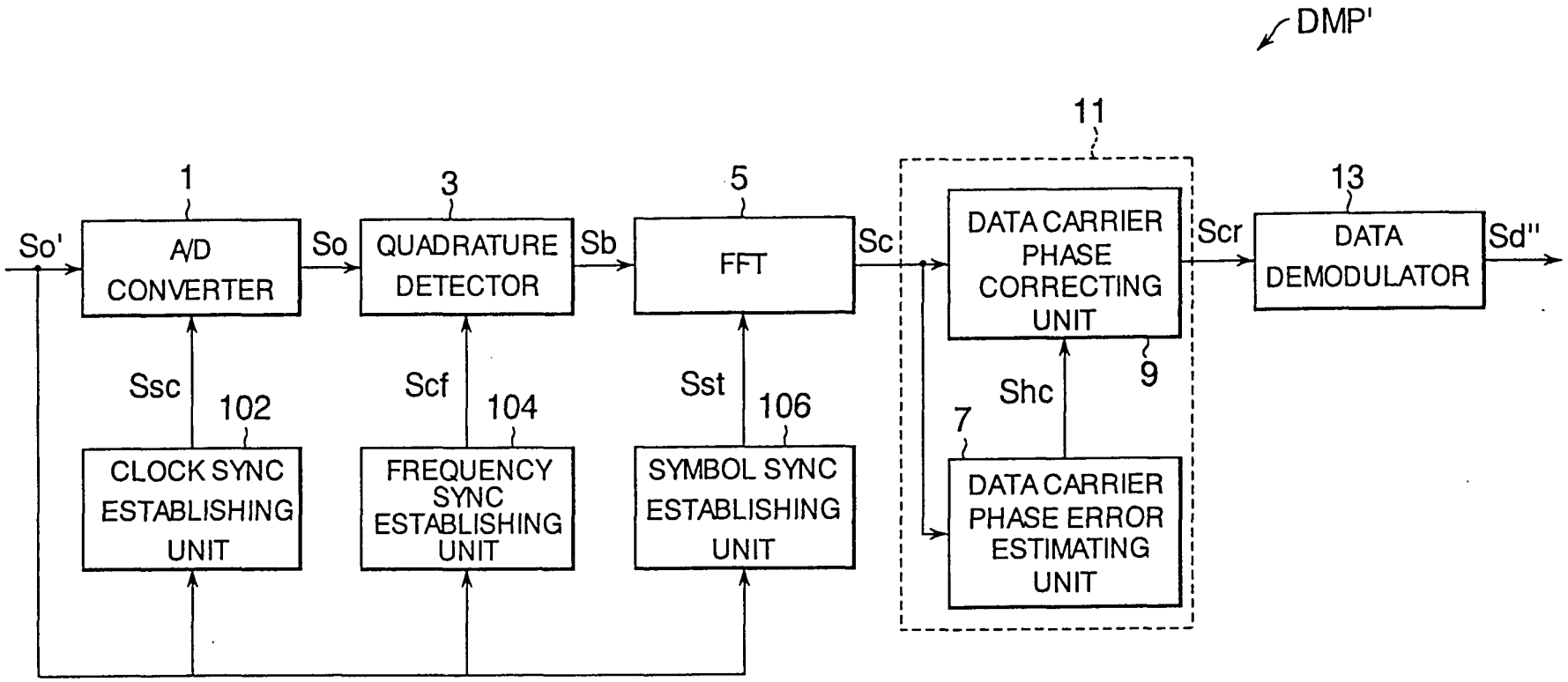

DMP'
11
1
3
5
13
So'
A/D CONVERTER
So
QUADRATURE DETECTOR
Sb
FFT
Sc
DATA CARRIER PHASE CORRECTING UNIT
Scr
DATA DEMODULATOR
Sd''
Ssc
102
CLOCK SYNC ESTABLISHING UNIT
Scf
104
FREQUENCY SYNC ESTABLISHING UNIT
Sst
106
SYMBOL SYNC ESTABLISHING UNIT
9
Shc
7
DATA CARRIER PHASE ERROR ESTIMATING UNIT

Fig. 10

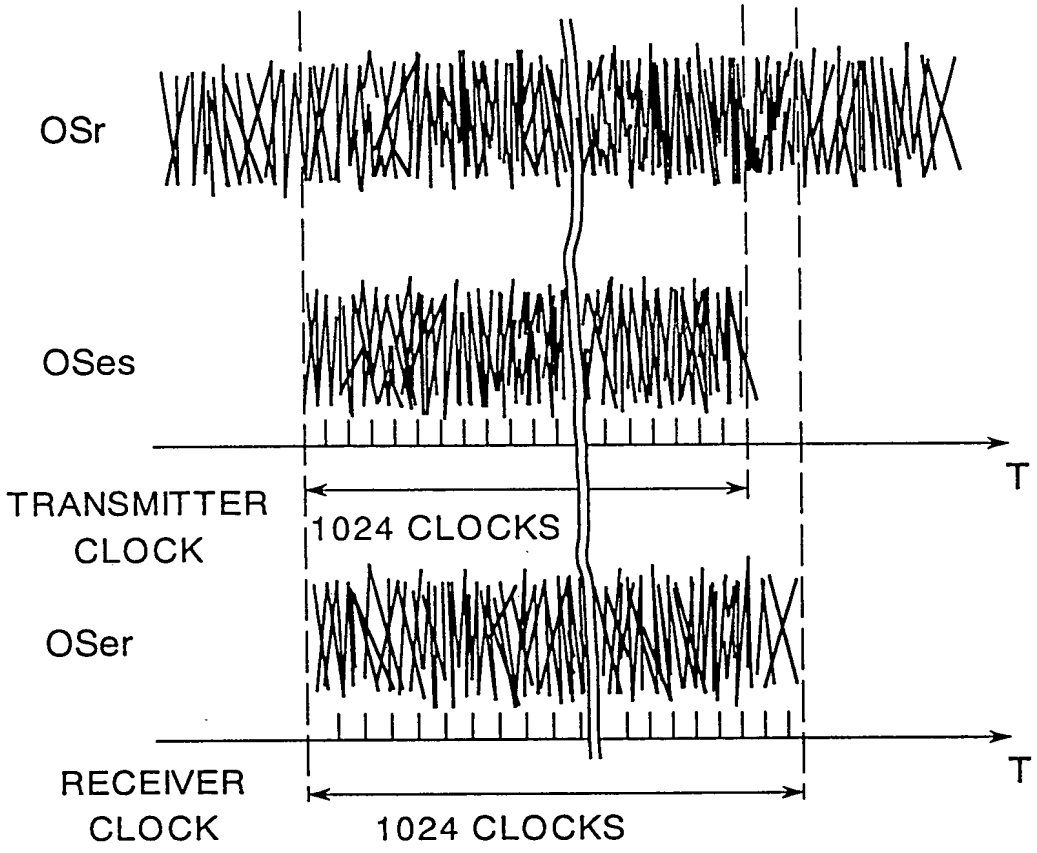

OSr
OSes
T
TRANSMITTER CLOCK
1024 CLOCKS
OSer
T
RECEIVER CLOCK
1024 CLOCKS

Fig. 11

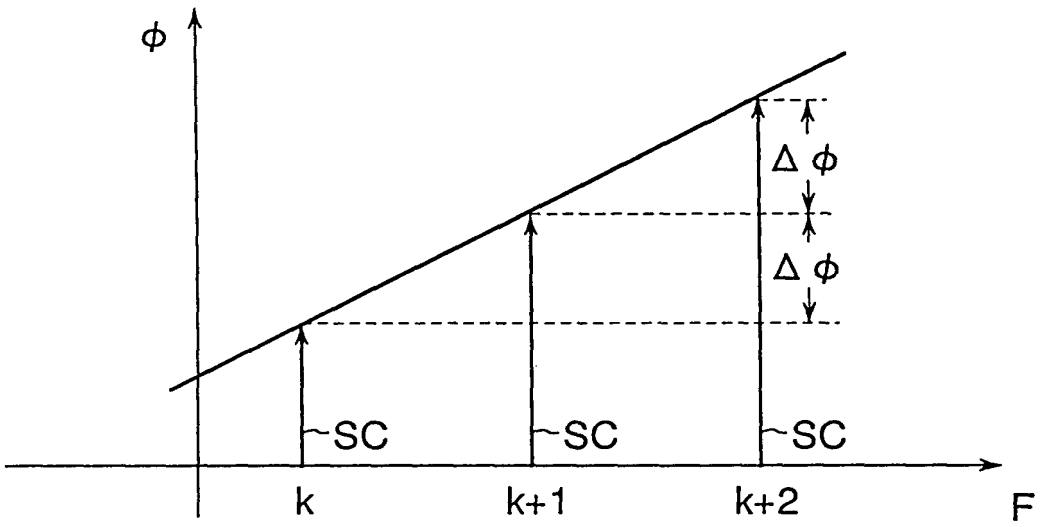


Fig. 12 PRIOR ART

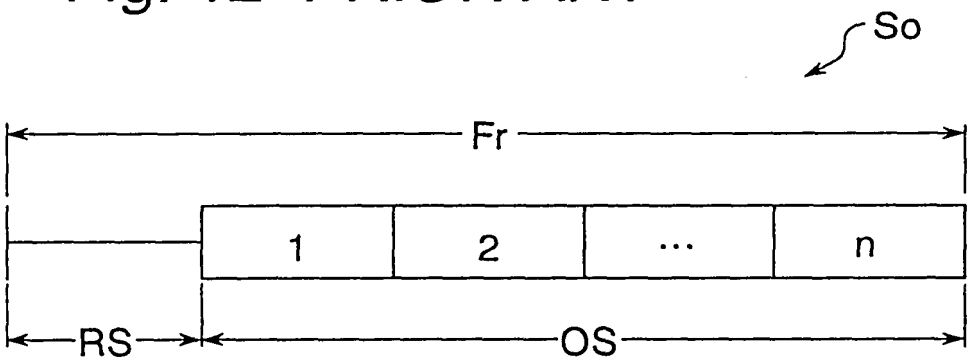


Fig. 13 PRIOR ART

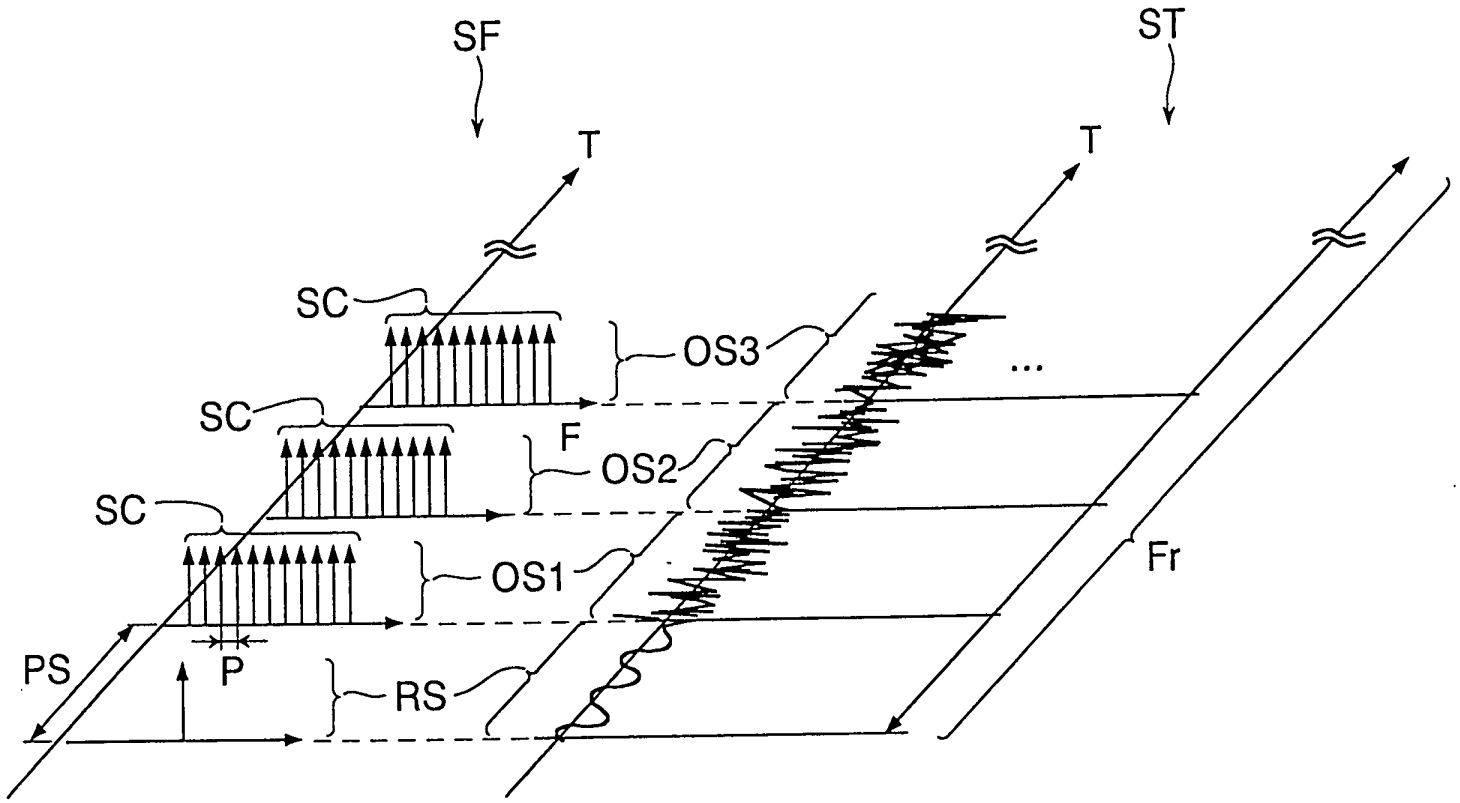


Fig. 14 PRIOR ART

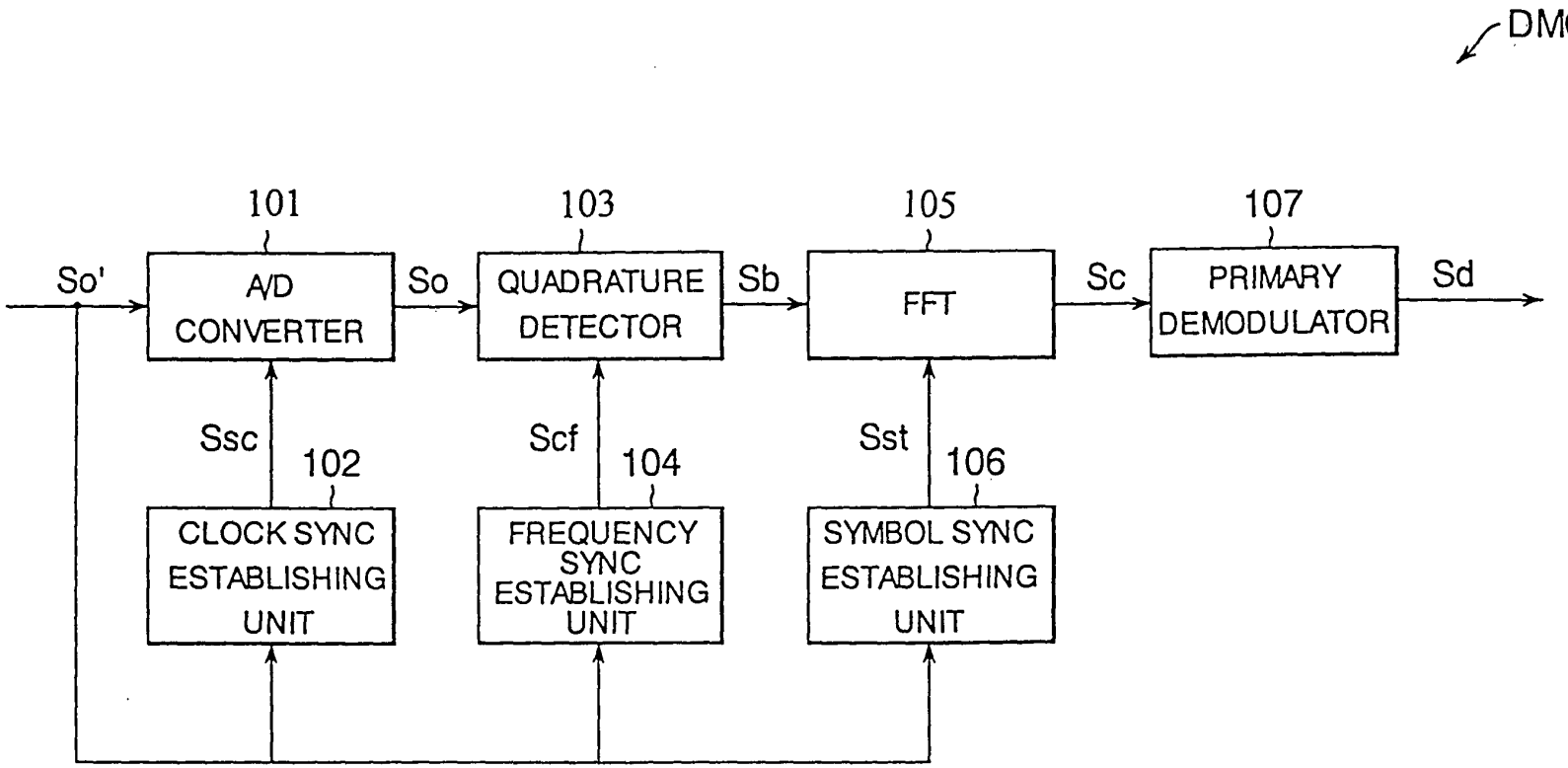


Fig. 15

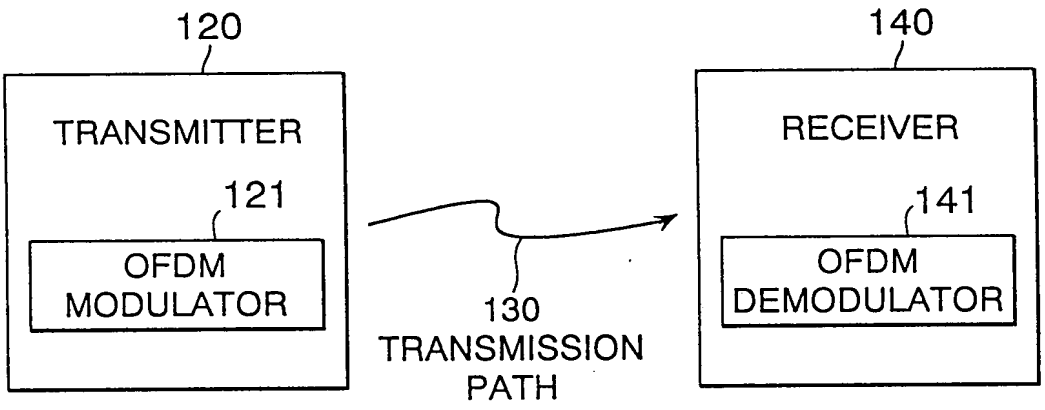
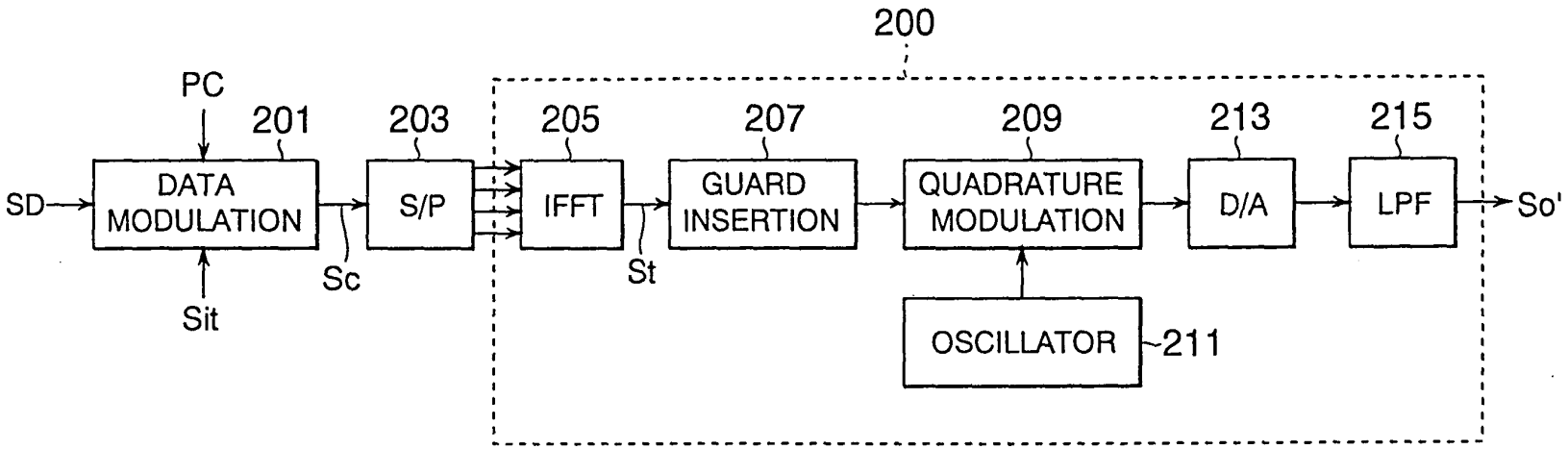

120
TRANSMITTER
121
OFDM
MODULATOR
130
TRANSMISSION
PATH
140
RECEIVER
141
OFDM
DEMODULATOR

Fig. 16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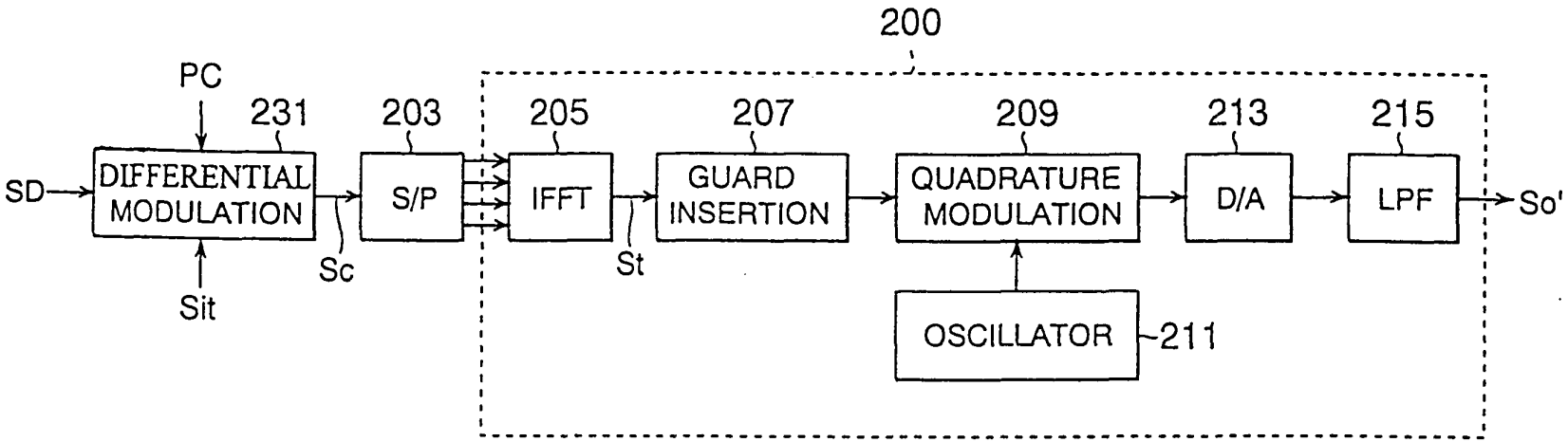
PC
201
203
205
207
209
213
215
SD
DATA MODULATION
S/P
IFFT
GUARD INSERTION
QUADRATURE MODULATION
D/A
LPF
So'
Sc
St
Sit
OSCILLATOR
211

Fig. 17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PC
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203
205
207
209
213
215
SD
DIFFERENTIAL MODULATION
S/P
IFFT
GUARD INSERTION
QUADRATURE MODULATION
D/A
LPF
So'
Sc
St
Sit
OSCILLATOR
211
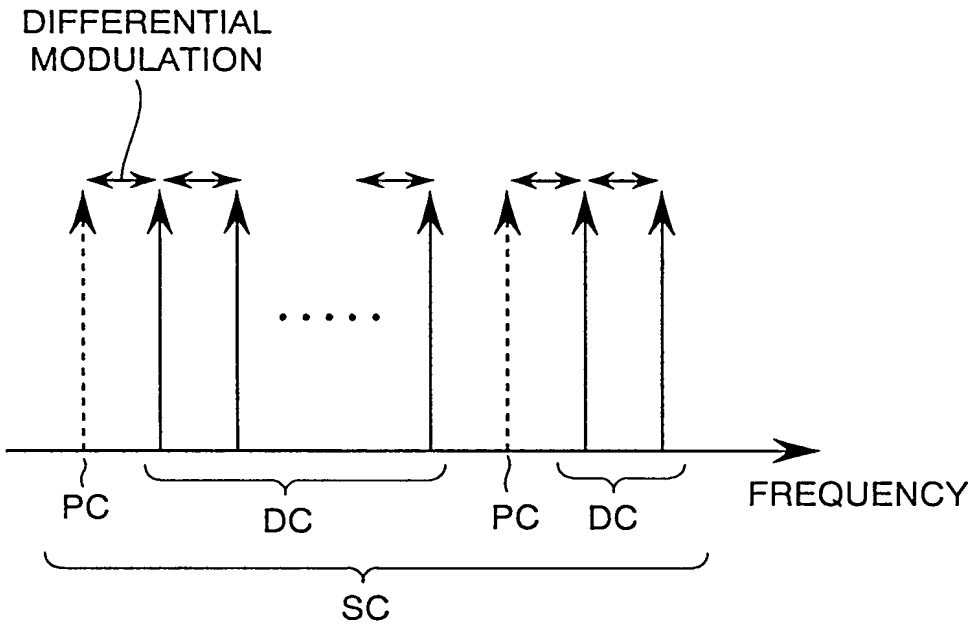
Fig. 18